AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) An optical module comprising:

multiple optical devices, at least two of the multiple optical devices being of a common device type formed on a common substrate and sharing a common data signal contact so as to define a group, each of the at least two of the multiple optical devices in the group being individually selectable relative to others in the group, and

a controller, coupled to the multiple optical devices such that the controller can select which of the at least two optical devices in the group will be active at a given time.

2. (previously presented) The optical module of claim 1 wherein the at least two of the multiple optical devices are lasers.

3. (original) The optical module of claim 2 wherein the lasers comprise top emitting lasers.

4. (original) The optical module of claim 2 wherein the lasers comprise bottom emitting lasers.

5. (original) The optical module of claim 2 wherein the lasers comprise distributed Bragg reflector lasers.

6. (original) The optical module of claim 2 wherein the lasers comprise distributed feedback lasers.

7. (original) The optical module of claim 1 wherein the at least two of the multiple optical devices comprise photodetectors.

8. (original) The optical module of claim 7 wherein the photodetectors comprise top receiving photodetectors.

9. (original) The optical module of claim 7 wherein the photodetectors comprise bottom receiving photodetectors.

10. (original) The optical module of claim 1 wherein the multiple optical devices comprise lasers and photodetectors.

11. (original) The optical module of claim 1 further comprising memory configured to store activation information for the at least two optical devices.

12. (original) The optical module of claim 1 further comprising redundancy selection circuitry.

13. (previously presented) An optical transceiver comprising:

multiple lasers,

multiple detectors,

storage,

a controller coupled to the storage, and

an interface via which an optical fiber can be coupled to at least two of the lasers or at least two of the detectors,

the number of lasers being unequal to the number of detectors,

the storage being configured to identify to the controller an optical device, from among a grouped set of redundant optical devices, that will be an active optical device,

the grouped set being defined by a grouping trench, and

each optical device in the group sharing a data input in common and a common electrical contact.

14. (currently amended) An optical transceiver comprising:

at least two optical devices of a first type formed on a common substrate and configured for coupling to a single optical fiber;

an optical device of a second type different from the first type and configured for coupling to a second optical fiber,

the at least two optical devices of the first type being related to each other by a common connection such that they can each receive a single source signal and are individually selectable for activation a given time such that at least one of the at least two optical devices can be automatically substituted for

an other of the at least two optical devices when the other of the at least two optical devices is a bad device.

15. (original) The optical transceiver of claim 14 wherein the at least two optical devices of the first type comprise lasers.

16. (original) The optical transceiver of claim 15 wherein the lasers comprise top emitting lasers.

17. (original) The optical transceiver of claim 15 wherein the lasers comprise bottom emitting lasers.

18. (original) The optical transceiver of claim 15 wherein the lasers comprise distributed Bragg reflector lasers.

19. (original) The optical transceiver of claim 15 wherein the lasers comprise distributed feedback lasers.

20. (original) The optical transceiver of claim 14 wherein the at least two optical devices of the first type comprise photodetectors.

21. (original) The optical transceiver of claim 20 wherein the photodetectors comprise top receiving photodetectors.

22. (original) The optical transceiver of claim 20 wherein the photodetectors comprise bottom receiving photodetectors.

23. (original) The optical transceiver of claim 14 wherein the multiple optical devices comprise lasers and photodetectors.

24. (original) The optical transceiver of claim 14 further comprising memory configured to store activation information for the at least two optical devices.

25. (original) The optical transceiver of claim 14 further comprising redundancy selection circuitry.

26. (currently amended) An optical chip comprising:

a group of optical devices formed on a common substrate and being of a common type, the group being defined by a grouping trench, the group being arranged for coupling to a single common optical fiber, the optical devices being selectable based upon an active indication, such that one of the optical devices in the group will be an active device and another of the optical devices in the group will be a backup optical device, the active device and the backup optical device being individually selectable such that, if the active device fails, the active device will be deselected and the backup optical device will be selected for use in place of the active device as a new active device.

27. (original) The optical chip of claim 26 further comprising:

storage configured to store the active indication.

28. (original) The optical chip of claim 26 wherein the group of optical devices comprise lasers.

29. (original) The optical chip of claim 26 wherein the group of optical devices comprise photodetectors.

30. (currently amended) The optical chip of claim 26 ~~wherein the~~ further comprising a common electrical connection among all of the optical devices in the group ~~is a substrate~~.

31. (currently amended) The optical chip of claim 26 wherein the group of optical devices are related ~~by a grouping trench~~ so as to be able to concurrently receive data in common with each other.

32. (original) The optical chip of claim 26 further comprising multiple fusible links and wherein the active device is determined by a state of at least one fusible link.

33. (previously presented) A method of creating an optical chip having redundant devices for use in an opto-electronic unit comprising:

growing active portions of multiple optical devices on a wafer using a semiconductor material,

processing the wafer to create complete optical devices,

patterning the semiconductor material to create individual optical devices,

grouping the devices by forming grouping trenches in the wafer around sets of at least two of the individual devices of a common type; and

connecting each of the at least two devices to a control circuit such that, common data can be received by any of the at least two devices in a set but the common data will only be handled by a device of the at least two devices in the set that is an active device.

34. (original) The method of claim 33 further comprising:

storing data that identified the device of the at least two devices in the group that is the active device.

Claims 35-41 (cancelled).

42 (previously presented) An optical transceiver comprising:

a number of detectors;

a number of semiconductor laser transmitters organized as a group defined by a grouping trench, at least some of the laser transmitters in the group being redundant for others of the laser transmitters in the group; and

a controller, coupled to at least the laser transmitters that controls which of the number of laser transmitters are active transmitters and which of the number of transmitters are redundant transmitters.

43. (original) The optical transceiver of claim 42 wherein the number of transmitters is at least twice the number of receivers.

44. (original) The optical transceiver of claim 42 wherein the number of transmitters is equal to the number of receivers.

45. (original) The optical transceiver of claim 42 wherein the number of transmitters is three times the number of receivers.

46. (original) The optical transceiver of claim 42 wherein the number of transmitters is four times the number of receivers.

47. (original) The optical transceiver of claim 42 wherein the number of transmitters comprises at least two groups.

48. (original) The optical transceiver of claim 47 wherein one of the two groups comprises two lasers.

49. (original) The optical transceiver of claim 47 wherein one of the two groups comprises three lasers, and wherein at least one of the three lasers is a backup laser.

50. (original) The optical transceiver of claim 49 wherein exactly one of the three lasers is the backup laser.

51. (original) The optical transceiver of claim 49 wherein exactly two of the three lasers are the backup laser.

52. (currently amended) A communications network comprising:

a first transmitter comprising a number of usable channels,

a first receiver, and

optical fibers connecting the first transmitter to the first receiver,

the first transmitter further comprising multiple lasers formed on a common substrate and organized into a group defined by a grouping trench, at least two of the multiple lasers in the group each being selectable as either active lasers or backup lasers,

the multiple lasers being controllable such that, if a specific channel is in use by an active laser and a laser failure occurs for that channel, a redundant laser can be substituted for the active laser, the redundant laser and the active laser being from the same group and, after the substitution, the specific channel can be used using the redundant laser.

53. (original) The communications network of claim 52 wherein the first transmitter further comprises programmable laser selection control.

54. (original) The communications network of claim 52 wherein the first transmitter further comprises transmitter failure detection sensor.

55. (original) The communications network of claim 52 further comprising an automatic failover circuit.